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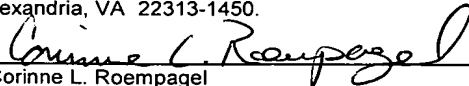
**for**

**RANDOM BONUS DELIVERY MECHANISM  
FOR A GAMING SYSTEM**

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# **RANDOM BONUS DELIVERY MECHANISM FOR A GAMING SYSTEM**

## **FIELD OF THE INVENTION**

**[0001]** The present invention is generally directed to gaming systems and is more particularly directed to systems and methods for awarding bonuses.

## **BACKGROUND OF THE INVENTION**

**[0002]** Gaming machines, such as slot machines, video poker machines, and the like, have been a cornerstone of the gaming industry for several years. Generally, the popularity of such machines with players is dependent on the likelihood (or perceived likelihood) of winning money at the machine and the intrinsic entertainment value of the machine relative to other available gaming options. Where the available gaming options include a number of competing machines and the expectation of winning on each machine is roughly the same (or believed to be the same), players are likely to be attracted to the most entertaining and exciting machines available. Such machines attract frequent play and, hence, increase profitability to the operator. Accordingly, in the competitive gaming machine industry, there is a continuing need for gaming machine manufacturers to produce new types of games, or enhancements to existing games, which will attract frequent play by enhancing the entertainment value and excitement associated with the game.

**[0003]** A feature employed in some prior games is a bonus feature that awards bonus awards to a player in addition to the awards available on a gaming machine's pay table. Bonus features of gaming machines may include special graphical and audio features that are in the style of a gaming machine's theme. Bonus features enhance the gaming experience for the player because they add to the entertainment value of the game and also represent an opportunity for greater rewards. Further, bonus features attract onlookers with attention-grabbing performances and the promise (or apparent promise) of additional awards from particular gaming machines. Because of this twofold effect on players and onlookers, there is an ongoing demand for enhanced bonus features.

**[0004]** Though bonus features improve the experience of playing a gaming machine, gaming machines are perceived by some players as having shortcomings in

comparison to other gaming options. For example, in a casino environment table games such as roulette and blackjack offer the additional experience of interacting with other players in a more social way through the shared gaming experience. Gaming machines, in contrast, have traditionally been perceived as offering a more solitary gaming experience lacking in the fun and excitement of interacting with other players.

[0005] There exists a need for enhanced bonus features and for gaming elements that will add to a more socially-interactive gaming experience for players and observers of gaming machines.

### **SUMMARY OF THE INVENTION**

[0006] A number of gaming machines feature a random bonus delivery mechanism. In response to gaming activity on gaming machines, a bonus feature is delivered to one or more gaming devices within a gaming environment. The bonus feature is accompanied by a visual display of bonus feature activity across multiple gaming machines, some or all of which may share in a bonus with one or more receiving a larger bonus than others.

[0007] Bonuses awarded in connection with visual bonus indicators on gaming machines may be awarded in connection with bonus award symbols left on gaming machine displays, and bonus awards according to the present invention may take a variety of forms.

[0008] According to some embodiments of the present invention, visual bonus indicators interact with display elements of a wagering game to alter outcomes or apparent outcomes of wagering games.

[0009] The above summary of the present invention is not intended to represent each embodiment, or every aspect, of the present invention. This is the purpose of the figures and the detailed description which follow.

### **BRIEF DESCRIPTION OF THE DRAWINGS**

[0010] The foregoing and other advantages of the invention will become apparent upon reading the following detailed description and upon reference to the drawings.

[0011] FIG. 1 is a front view of a gaming machine embodying the present invention.

[0012] FIG. 2 is a block diagram of a control system suitable for operating the gaming machine.

[0013] FIG. 3 is a front view of a plurality of gaming machines showing a visual bonus indicator.

[0014] FIG. 4 is another front view of a plurality of gaming machines showing a bonus animation.

[0015] FIG. 5 is a front view of a gaming machine display having two display areas.

[0016] FIG. 6 is a front view of a gaming machine display showing interaction between a visual bonus indicator and a gaming element.

[0017] FIGS. 7a-7d are block diagrams showing gaming machine communication with a visual bonus indicator controller.

[0018] While the invention is susceptible to various modifications and alternative forms, specific embodiments have been shown by way of example in the drawings and will be described in detail herein. It should be understood, however, that the invention is not intended to be limited to the particular forms disclosed. Rather, the invention is to cover all modifications, equivalents, and alternatives falling within the spirit and scope of the invention as defined by the appended claims.

#### **DESCRIPTION OF ILLUSTRATIVE EMBODIMENTS**

[0019] Turning now to the drawings and referring initially to FIG. 1, there is depicted a gaming machine 10 executing a game of chance that may be used to implement a random bonus delivery according to the present invention. The gaming machine 10 includes a visual display 12 preferably in the form of a dot matrix, CRT, LED, LCD, electro-luminescent, plasma, or other type of video display known in the art. The display 12 preferably includes a touch screen overlaying the monitor. Gaming machines according to the present invention may include video displays combined with mechanical wagering games. In the illustrated embodiment, the gaming machine 10 is an upright version in which the display 12 is oriented approximately vertically relative to the player. Alternatively, the gaming machine 10 may have another form factor such as a "slant-top" version in which the display 12 is

oriented at an angle (for example, about a 30-degree angle) toward a player of the gaming machine 10.

**[0020]** The gaming machine 10 allows the play of games of chance by a player. In one embodiment, the gaming machine 10 is operable to play a game entitled “Duck Duck Goose,” having a group game theme. The display 12 shows first, second and third reels (respectively, 14, 16, and 18), which spin in response to a wager and a player’s pull of a spin handle 20 or push of a “play” button 22. A player is awarded an award when symbols 24 on the reels align with selected pay lines 26, in accordance with a pay table (not shown). A visual bonus indicator 28, in the form of a goose, indicates participation in a bonus feature (or potential bonus feature) as explained in greater detail below.

**[0021]** FIG. 2 is a block diagram of a control system suitable for operating the gaming machine 10. Coin/credit detector 30 signals a central processing unit (“CPU”) 32 when a player has inserted a number of coins or played a number of credits. Then, the CPU 32 operates to execute a game program that causes the display 12 to display the basic game that includes symbol-bearing reels, such as reels 14, 16, and 18 of FIG. 1. The player may select the number of pay lines 26 (shown in FIG. 1) to play and the amount to wager via touch screen inputs or other controls whose signals are forwarded to the CPU 32 via an input/output controller 34. The basic game commences in response to the player activating a play switch 36 (e.g., by pulling the spin handle 20 or pushing the play button 22 as shown in FIG. 1), causing the CPU 32 to set the reels in motion, randomly select a game outcome, and then stop the reels to display symbols corresponding to the game outcome. In one embodiment, one or more game outcomes may cause the CPU 32 to enter a bonus mode whereby a bonus game is displayed.

**[0022]** A system memory 38 stores control software, operational instructions, and data associated with the gaming machine 10. In one embodiment, the system memory 38 comprises a separate read only memory (ROM) and battery-backed random access memory (RAM). It will be appreciated, however, that the system memory 38 may be implemented on any of several alternative types of memory structures or may be implemented on a single memory structure. A payoff mechanism 40 is operable in response to instructions from the CPU 32 to award a payoff of coins or credits to the player in response to certain winning outcomes which may occur in the basic or bonus games. The payoff amounts corresponding to certain combinations

of symbols in the basic game may be predetermined according to a pay table in the system memory 38. The payoff amounts corresponding to certain outcomes of the bonus game may also be stored in the system memory 38.

**[0023]** Visual display of gaming events may be accomplished with a single display 12 as shown in FIG. 1. Alternatively, as shown in FIG. 2, a primary display 42 may display some components of a game's visual elements and a secondary display 44 may display other components. For example, a primary display 42 may be used to show the general game play of a basic game and a secondary display 44 may be used for bonus game displays.

**[0024]** A communications module 46 allows a gaming machine 10 to communicate with other gaming machines or with a central controller over a communications network. The communications module 46 may be a networking card (for example, an Ethernet card), a modem, a wireless networking module, or the like. The communications module 46 allows the gaming machine 10 to communicate its status to a network and to receive instructions from a network. The communications module 46 allows for several gaming machines to be monitored and/or controlled from a central point.

**[0025]** Turning now to FIG. 3, a three-machine bank 48 is shown, having first, second, and third gaming machines (50, 52, and 54, respectively). Each gaming machine is provided with a communications module 46 connected to a communications conduit 56 for communicating in a communications network 57. First, second, and third displays (58, 60, and 62, respectively) are provided on the gaming machines 50, 52, and 54. Similarly to the gaming machine 10 of FIG. 1, the gaming machines 50, 52, and 54 of FIG. 3 are adapted to play a "Duck Duck Goose" game having a group game theme. Responsive to a visual bonus indicator controller 64 provided on the communications network 57, a visual bonus indicator 28 is shown proceeding from the first display 58 to the second display 60.

**[0026]** The visual bonus indicator 28 is an indicator to a player of a gaming machine that a probability exists of being awarded a bonus award. In the "Duck Duck Goose" game shown in FIG. 3, the visual bonus indicator 28 is a goose image. The visual bonus indicator 28 is animated on each of the displays that it is displayed on.

**[0027]** Visual bonus indicators 28 according to the present invention enable a variety of techniques for increasing the appeal of gaming machines to players. A

visual bonus indicator 28 may leave behind bonus award symbols 68 on one or more of the gaming machines upon which the visual bonus indicator 28 has appeared. For example, in FIG. 3, the visual bonus indicator 28 having the image of a goose has left behind a bonus award symbol 68 having the image of a golden egg on the first display 58. The bonus award symbol 68 is an indication that a bonus award is available to a player or has been awarded to the player. The bonus award may be awarded immediately upon a bonus award symbol 68 being displayed, or it may be activated at a later time by a player (for example, by the player touching the bonus award symbol 68 in a touch-screen enabled gaming machine). Bonus awards awarded with the bonus award symbol 68 may include bonus awards such as free plays of a gaming machine, free credits or coins, the ability to lock a displayed reel in place or to otherwise confer an advantage upon the player, a grant of spins or plays that are incapable of losing, and the like. Bonus awards may also take the form of prizes awarded to the player—or an indication that a prize is available to a player. Prizes that may be awarded to a player include physical objects, meals, prizes such as ice cream or show tickets, and the like. In combination with visual displays of a visual bonus indicator 28, audio performance of gaming machines may also change when a visual bonus indicator is shown. A game's entire audio performance or soundtrack may be replaced with sounds particular to a visual bonus indicator 28, or sounds particular to the visual bonus indicator 28 may be played along with a gaming machine's normal sounds to indicate a bonus event.

**[0028]** The visual bonus indicator 28 may be displayed as traveling from gaming machine to gaming machine in a bank 48 of gaming machines. In such a display, the bonus indicator 28 may be displayed partially on the second gaming machine 52 before its display has completely terminated from the first gaming machine 50. Such a display is shown in FIG. 3, in which the head of the goose visual bonus indicator 28 is shown on the second display 60 while the tail of the goose visual bonus indicator 28 remains on the first display 58. Alternatively, the visual bonus indicator 28 may randomly or apparently randomly be displayed on non-contiguous displays, providing a more random (or apparently random) award of bonus awards to players. For example, in FIG. 3, a visual bonus indicator 28 could first be shown on the third display 62 and next shown on the first display 58.

**[0029]** The sequential movement of the visual bonus indicator 28 from one display to a contiguous display, such as movement from the first display 58 to the second display 60, is advantageous in that it can provide an incentive for players to play gaming machines that the visual bonus indicator 28 appears to be heading toward. In one embodiment, the visual bonus indicator 28 is only displayed on gaming machines having an active wagering session in progress, so that only players who are actively playing a gaming machine may be awarded a bonus award. In another embodiment, the visual bonus indicator 28 may be displayed on idle machines which are not being wagered upon, even though idle machines may or may not be able to win. Random or apparently random display of the visual bonus indicator 28 is advantageous in that it provides an indication to players that a bonus award, in addition to the bonus awards that are generally available on gaming machines, may be available at any time. A player's engaging in a bonus award according to the present invention may be dependent on player-specific factors, including the number of coins per minute bet, the number of credits on the gaming machine, or other player status such as historical play data for a player to be awarded a bonus.

**[0030]** In addition to or in lieu of the awarding of a bonus award with the bonus award symbol 68 as shown in FIG. 3, a visual bonus indicator 28 may award bonus awards by other techniques. For example, several different types of bonus award symbols 68 may be available, and more minor bonuses may be granted to every gaming machine upon which the visual bonus indicator 28 appears, with greater awards granted to players of only selected ones of the gaming machine upon which the visual bonus indicator 28 appears. Greater awards may be accompanied by more extensive animations and more attractive or larger bonus award symbols 68. In the "Duck Duck Goose" example, a goose may be shown laying a golden egg in a first animation and building an entire nest of golden eggs in a second animation. The bonus award symbols of a golden egg and an entire nest of golden eggs may be associated with different bonus award levels.

**[0031]** Further, visual bonus indicators 28 according to the present invention may be animated in an even more eye-catching manner to award greater bonus awards on certain gaming machines. Turning now to FIG. 4, a bank 48 of three gaming machines 50, 52, and 54 is shown with first, second, and third displays 58, 60, and 62. The first display 58 displays a bonus award symbol 68, indicating that the visual



bonus indicator 28 has already been displayed upon the first display 58. The visual bonus indicator 28 is shown in a bonus animation on the third display 62, indicating a greater bonus award to the player of the third gaming machine 54. According to some embodiments of the present invention, different bonus animations may be provided tailored to different types of bonus awards.

**[0032]** Displays for use with the present invention may be modified to maximize the impact of visual bonus indicators. For example, displays may be provided with multiple display screens or display areas, with particular screens or areas specified for displaying visual bonus indicators. FIG. 5 shows a display 12 having a primary display area 70 for displaying basic gaming events and a secondary display area 72 for displaying a visual bonus indicator 28. In this embodiment, the display of a visual bonus indicator 28 is visually separate from the display of basic gaming events, giving the player more than one image to focus on. Alternatively, a visual bonus indicator 28 may overlap graphics associated with standard gaming events (*e.g.*, a visual bonus indicator 28 may be overlaid on visual displays of reels as shown in FIGS. 3 and 4), or the display of a visual bonus indicator 28 may temporarily replace the display of standard gaming elements (such as reels) during a bonus animation or during any time a visual bonus indicator 28 is shown on a display.

**[0033]** Visual bonus indicators 28 may be used to interact with gaming elements, as shown in FIG. 6. FIG. 6 shows a visual bonus indicator 28, again in the form of a goose, nudging a final reel 74 on a display 12 of a five-reel game so that a winning symbol 76 aligns with other winning symbols to result in a win for a player. Such an interactive event may occur randomly (such as in response to signals from a visual bonus indicator controller, not shown) or may occur as a result of a player's selection, for example, of a button such as the bonus interaction button 78. Such an option may be given to a player in conjunction with a previous visual bonus indicator event, such as a previous bonus animation or the appearance of a bonus award symbol 68 (as shown in FIG. 3). Thus, the bonus award symbol 68 may serve as an indicator of a future bonus award. Likewise, referring once again to FIG. 3, a bonus award symbol 68 such as the golden egg may eventually "hatch" into an additional visual bonus indicator 28, which may go on to be displayed on gaming machines 10 in a gaming environment as described herein. In such an embodiment, animations and other events involving visual bonus indicators 28 may increase throughout the day so

that peak times for gaming correspond with peak activity of visual bonus indicators 28.

**[0034]** Visual bonus indicators 28 according to the present invention may be controlled and used in a variety of gaming environments using a variety of types of communication between gaming machines 10. FIGS. 7a-7d are block diagrams illustrating different ways in which visual bonus indicators 28 may be implemented and controlled. In the embodiment of FIG. 7a, a visual bonus indicator controller 64 is directly connected to one gaming machine 10, and communications directed to individual gaming machines 10 are routed through other gaming machines 10. Thus, the visual bonus indicator 28 may be controlled via signals sent to all gaming machines 10. In the embodiment shown in FIG. 7b, a visual bonus indicator controller 64 is connected to network connectors 80, which in turn are connected to individual gaming machines 10. The visual bonus indicator 28 may be controlled by signals sent to all gaming machines 10 or to individual gaming machines 10 or subsets of gaming machines 10 by the visual bonus indicator controller 64.

**[0035]** FIG. 7c shows a visual bonus indicator controller 64 adapted for wirelessly controlling a visual bonus indicator 28 on a plurality of gaming machines 10. Wireless signals 82 may be sent from and received by the visual bonus indicator controller 64. Additionally, if communication between gaming machines 10 is desired, wireless signals 82 may be sent between gaming machines.

**[0036]** As shown in FIG. 7d, a visual bonus indicator controller 64 may be provided within a gaming machine 10, with network connections 80 provided between gaming machines 10 to allow the visual bonus indicator controller 64 to control the visual bonus indicator 28 across multiple gaming machines 10. While FIGS. 7a-7d each show three gaming machines 10, it is to be understood that the present invention may be used in gaming environments having two or more gaming machines 10.

**[0037]** While the present invention has been described with reference to one or more particular embodiments, those skilled in the art will recognize that many changes may be made thereto without departing from the spirit and scope of the present invention. For example, while the present invention has been described with respect to gaming machines operable to play slot games, it is to be understood that the principles of the present invention can be applied to gaming machines operable to play other games such as poker, blackjack, and keno. In addition, bonus indicator

controllers according to the present invention may be implemented as part of a more comprehensive gaming machine management system. Further, while certain methods have been described above as being executed in sequences, it is to be understood that certain steps may be performed in a different order or performed concurrently without departing from the scope of the present invention. Each of these embodiments and obvious variations thereof is contemplated as falling within the spirit and scope of the claimed invention, which is set forth in the following claims.